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ABSTRACT

In an effort to help developmentally delayed or disabled children succeed in an integrated or regular early childhood classroom setting, the Rural Area Model Preschool Project staff developed an ecological inventory to identify the behaviors and skills expected of preschoolers in classroom settings. The inventory was used for 2 months in eight classroom settings. In regards to cognitive competence, teachers expected children to recognize their names, body parts, peers, and classroom locations and activities. For executive competence (the ability to make decisions about classroom interaction and activities), teachers expected children to have the ability to find unoccupied chairs or mats and wash hands. Instrumental competence (the ability to use tools and materials appropriately), involved expectations for using spoons, crayons, and brushes; putting on clothing; throwing away trash; and so forth. For social competence (communicating, feeling, expressing, dealing with conflict, and cooperating), the most frequent expectation was that children would ask for something they wanted and could not get for themselves. It is concluded that the inventory may provide important information for those making decisions about placing children in a preschool setting or those who wish to predict or bring about a child's success in a group setting. Ten references and a copy of the inventory are appended. (SAK)

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Ecological Analysis of Early Childhood Settings: Implications for Mainstreaming

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Ecological Analysis of Early Childhood Settings:

Implications for Mainstreaming

In recent years there has been a growing interest in using an ecological approach in establishing options and parameters for the inclusion of children with developmental and special needs into regular early childhood classrooms (Braun & Lasher, 1978; Guralnick, 1982). The ecological perspective considers that a number of different relationships exist between the environment (physical and social) and the expression of human behavior (Bronfenbrenner, 1979). Ethological research in particular, has pointed to the contribution of individual characteristics including developmental capabilities, to the outcomes of a particular person-environment encounter. The changing focus from segregation or exclusion of children with special needs to inclusion through a variety of "mainstreaming" options reflects shifts in beliefs about the extent to which individual characteristics require adapting the environment (Cooke, Ruskus, Apolloni & Peck, 1981; Guralnick, 1982). Drastic alterations in environmental demands and opportunities produce their own consequences. The question for early childhood professionals remains one of achieving balance - how much should be changed and to what degree is a child expected to adapt (Paasche, Gorrill & Strom, 1990)?

It is well known that mainstreaming includes as its most prominent feature, keeping the child in the least restricted (or "normal") environment feasibly exposing him or her to as many "regular" children as possible. This exposure is designed to facilitate the holistic acquisition of physical, problem solving, communication skills and

other behaviors (primarily social) which are characteristic of "normal" children of roughly the same chronological and/or developmental age. A non-mainstreamed child encounters fewer stimuli to and reinforcements for behavior which is normative in a regular classroom setting. The rationale for mainstreaming at the early childhood level has at least as an implicit goal of preparing the child to began to live a life interaction, productive play, and personal qualities which approximate the life of a developing child without a developmental disability (Guralnick, 1981; Ispa & Matz, 1978).

Considering the need for evaluation of both child skill level and environmental or structure demands (which may become barriers to the successful integration of a child or children into an early childhood setting) two primary issues appear to require a response: (1) when a child is successfully integrated, are there special skills or behaviors that the child possessed or developed that can be identified as necessary for satisfactory participation in an early childhood setting; and (2) can environmental characteristics and social expectations (i.e. agenda's) be identified to clarify the skills and behaviors which form basic criteria for <u>any</u> child's successful involvement and inclusion in an early childhood setting.

An ecological inventory is suggested here as a prerequisite to successful mainstreaming of preschool children. Preschools for normal children are themselves (if they are good ones) specially adapted environments: for example, the furnishings are appropriately sized; they are safe; there are opportunities for many activities at which the child can succeed; adults are present to help the child negotiate the social,

emotional, physical, and intellectual challenges. The experience and thoughtful environmental preparations of generations of practitioners have developed appropriate models which work for most children. The most recent publication of NAEYC's Developmentally Appropriate Practice (Bredekamp, 1987) offers a comprehensive design for establishing early childhood environments which are most developmentally supportative of all children.

If the developmentally delayed or disabled child is to have a profitable and enjoyable experience in an integrated or regular early childhood classroom setting, a process of evaluating the characteristics of the child and of the environment is needed. It is not suggested that this is a new discovery. The literature abounds with suggestions such as: simplify the environment; introduce new materials slowly; break up learning tracks into small units, and so on (Feeney, et.al., 1991). What this paper briefly describes is a way of identifying behaviors or skills which most early childhood programs expect. The terms "preschool" and "early childhood" are used interchangeably and refer to programs which are organized for children three to five years of age. Strategies can then be developed for increasing the likelihood that mainstreamed children will succeed. Failures are unpleasant and frustrating for mainstreamed children and their teachers alike. They affect other children's perceptions of and feelings about the mainstreamed child (Guralnick, 1984).

The Rural Area Model Preschool Project staff developed an Ecological Inventory that could be used to identify the behaviors or skills expected by preschool children in a variety of early childhood settings. The Inventory was developed from a large

number of observations made of children's behavior in an integrated preschool and validated in five additional early childhood facilities with and without special needs children. These initial observations were unstructured, objective observations of what children do in preschool -- no attempt was made in the beginning to identify or classify behaviors or skills. This phase of observation led to identification of a naturally occurring set of behaviors which could be divided into specific areas of action and interaction involving the child (Guralnick & Weinhouse, 1983). The behaviors were derived through observation in the preschool for which it had been designed for a period of about 20 hours. The total list of skills observed was then divided into four somewhat overlapping sets of competence:

Cognitive competence -- evidence of appropriate physical or verbal behavior based on assumed underlying mental ability

Executive competence -- proper assessment and decision-making based on perception of a social situation

Instrumental competence -- ability to manipulate objects within the environment appropriately as defined by adult expectations

Social Competence -- the ability to initiate, sustain, and exit interactions with others in an acceptable fashion. (A complete description of the development of human competence model adapted from Thomas, R.G. (1985). Home economics in secondary education and the development of human competence. Journal of Home Economics, 77 (3), 2-6, 50.)

From this set of competencies, statements were developed that identified the desired behaviors or skills for the child, and an observational instrument was developed. The Ecological Inventory resulted and is a list of behaviors or skills which are thought to be more or less required for success in the environment for which the inventory was designed -- in this case, an early childhood classroom. By using this Inventory, it was possible to find out and document what is expected of the child in a preschool setting. The Inventory is not designed to identify whether or not the child can perform the tasks listed -- it is not a test of the child's ability but an attempt to identify what the adults in the setting expect the child to try to do. The four sets of competency areas each list up to 20 competencies that might be observed, and the observer responds with NOT OBSERVED, OCCASIONALLY OBSERVED, or FREQUENTLY OBSERVED with specific limits for each category. (see attachment for instrument.)

The Ecological Inventory was used for a two month period in eight early childhood settings by 12-16 different observers at different times of the day and on different days of the week. Results indicate that behaviors expected for successful participation in a preschool setting can be identified, described, and an hierarchical assignment can be made of the behaviors or skills. Results of each competence area is described below.

COGNITIVE COMPETENCE

Cognitive competence, defined as behaving in a way to show that the child understands basic concepts, includes skills such as problem solving, perceiving,

understanding, inquiring, creating, interpreting, and predicting. The Inventory recorded as closely as possible what is expected of the child in that child's setting in this area of competence.

Results:

In the area of Cognitive Competence teachers always expected that a child would be able to recognize and answer upon hearing his or her name. Other frequently expected competencies were being able to point to body parts when asked, being able to find one's own locker, and being able to point out a peer when told the other child's name. In descending order, the following were also frequently expected: naming body parts that are pointed to, knowing when she/he needs to use the bathroom, pointing to colors correctly, naming colors correctly, finding own name when it is written, knowing the names of other areas/activities in the classroom, and remembering explained activities.

EXECUTIVE COMPETENCE

Executive competence, defined as the child's ability to make decisions about classroom interaction and activities, broadly includes such skills as analyzing, valuing, deciding, planning, monitoring, and correcting. Most frequently observed executive competency expectations were the ability to find unoccupied carpet mats, chairs, etc.; washing hands at appropriate times; and not leaving or opening doors until time specified and with an adult.

Being able to be redirected, walking indoors, keeping utensils and materials out of mouth when inappropriate, and using a quiet voice inside were more frequently

than occasionally expected. Being able to 'stick' to a choice once made and realizing the need to push up sleeves for messy activities were occasionally observed expectations.

Other executive competencies frequently expected included such self-monitoring skills as following safety rules outlined by adults, keeping play items in the appropriate area, to resist participating in or initiating destructive/disruptive activities, staying with the group during group activities, and staying in the play areas when outdoors.

INSTRUMENTAL COMPETENCE

Instrumental competence, defined as the ability to use available tools and materials appropriately, broadly includes such skills as manipulating, shaping, initiating, designing, obtaining, and operating.

Results:

The most frequently observed instrumental competency expectations were the abilities to use spoons, crayons, and brushes appropriately. Other competencies frequently expected included washing hands; putting on coat, hat, mittens, etc. when needed; asking for help with buttons, snaps, etc. on clothes; putting disposable items in the garbage; and reaching for toilet paper. Of all categories, this was the most "flexible", perhaps indicating easier adaptation for physically based skills within a preschool setting.

SOCIAL COMPETENCE

Social Competence includes, communicating, feeling, expressing, dealing with conflict, and cooperating. The most frequently observed social competence expectation was for children to ask for something they want and cannot get by themselves. Other frequently expected behaviors included appropriate verbalization (no name-calling, swearing, etc.), following adult/peer models for novel activities, making eye contact when speaking/being spoken to in a non-hostile situation, initiating appropriate conversation with peers, taking turns, and initiating appropriate conversation with adults.

Summary of Use of Ecological Inventory

It appears that the use of such a listing as the Ecological Inventory may provide teachers, parents, and others with information that is important for making decisions about placement of children in a preschool setting. This type of instrument can provide useful data for predicting and/or implementing a child's successful participation in a group setting, and it could also be used to identify expectations unique to a particular program. Thus a child might be placed in the most appropriate setting if the four sets of competencies can be used for making a 'match' between child and group. This Inventory could be used for both children with handicapping conditions and those who have not been identified as having handicaps. The Inventory can also provide the adults with information about skills that can be developed to increase the child's changes of satisfactory participation in a preschool.

The most important application consideration of the Inventory is not in the listing itself but in the process of developing an awareness of what children are expected to do in order to be successful and to "belong" in a social setting. Making sure that careful objective observations are made is the key to developing such a document which should be designed for each early childhood program. The Inventory designed for this project was site and area (rural remote) specific. While a number of expectations will remain consistant across a number of early childhood programs, the individualized nature of caring for young children necessitates a personal view of specific programs.

Because early childhood classrooms and programs are busy and dynamic entities, much of the "information" and knowledge about a program's individualized approach often rests within the informal communication system of the adults. While this is a normal somewhat adaptive function of settings with dependent care giving it is not always "healthy" in terms of making behavioral expectations clear and consistent. Documentation of "clinical" (i.e. objective) observations as was done for the described Inventory, is essential for defining whether children can indeed "fit" and be included in a specific program. The attached Inventory is designed to be used with modification based on further observation and documentation of each early childhood classroom's environment. "Fitting in" is the primary adaptive goal for mainstreaming and knowing how each element (child and environment) may give and take is essential for building comfortable and successful programs.

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ECOLOGICAL INVENTORY

An ecological inventory is a list of behaviors or skills which are expected to be performed in the environment for which the inventory was designed. In this particular instance, the behaviors on this form were derived through observation in a preschool for a period of about twenty hours. The total list of skills was then broken down into four sets of competencies: cognitive competence, defined as behaving in such a way as to show that the child understands basic concepts; executive competence, which means that the child is able to make decisions about how he or she wants to interact in the classroom; instrumental competence, which is the demonstration of being able to use the tools and materials available to the child in the preschool; and social competence, the ability to start, maintain, and then end interactions with children and adults in a way that others find acceptable. The purpose of this inventory is to find out and document what is expected of the child in a preschool setting, not whether or not the child can perform the tasks listed - it is not a test of the child's ability so much as an attempt to find out what the adults in the setting expect the child to try to do.

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COGNITIVE COMPETENCE

eing able to demonstrate understanding of desired concept.

EQUENTLY	OCCASIONALLY	NOT OBSERVED	
____	____	____	Remembers activities after they have been explained.
____	____	____	Can find his/her name when it has been written down.
____	____	____	Answers when he/she hears his name.
____	____	____	Can find his/her locker.
____	____	____	Follows requests which have one or two parts.
____	____	____	Recognizes potentially dangerous situations.
____	____	____	Knows when he/she has to use the bathroom.
____	____	____	Can point to body parts when asked.
____	____	____	Can name body parts that are pointed to.
____	____	____	Can point to the right color when asked.
____	____	____	Can name the color of an object.
____	____	____	Can point out a peer when told the other child's name.
____	____	____	Knows the names of the other areas or activities available to all children in the preschool room/playground.

:inecolog/TMII

EXECUTIVE COMPETENCE

Being able to decide what to do, given the available choices.

FREQUENTLY	OCCASIONALLY	NOT OBSERVED	
____	____	____	Able to be redirected when behaving inappropriately or wandering without direction.
____	____	____	Keeps utensils/supplies out of mouth if they are not designed to be in the mouth.
____	____	____	Walk indoors.
____	____	____	Wash hands at appropriate times - before making snack and eating, after toileting and finger painting, etc.
____	____	____	Keep play items in the appropriate area.
____	____	____	Able to make a choice between two or more options.
____	____	____	Able to stick to choice once made.
____	____	____	Able to resist destructive/disruptive activities - throwing things, stealing, etc.
____	____	____	Able to sit 5 - 10 minutes at a time.
____	____	____	Stays out from behind doors.
____	____	____	Does not open doors/leave until time to go (usually with an adult).
____	____	____	Uses a quiet voice inside.
____	____	____	Stays with the group during group activities.
____	____	____	Follows safety rules outlined by adults.
____	____	____	Stays in the play area when outdoors.
____	____	____	Sits with both feet on the floor when in a chair.
____	____	____	Realizes need to push up sleeves for messy activities.
____	____	____	During snack takes the first item touched.
____	____	____	Passes things on his/her own or when reminded.
____	____	____	Can find unoccupied carpet mats, chairs, etc.

pc:inecolog/TMII

INSTRUMENTAL COMPETENCE

Being able to use tools and materials available to the child.

FREQUENTLY	OCCASIONALLY	NOT OBSERVED	
____	____	____	Fetches apron/smock for snack preparation, painting, etc.
____	____	____	Able to use spoons, crayons, and brushes appropriately.
____	____	____	Participates in clean-up after an activity is finished.
____	____	____	Will ask for help with buttons, snaps, etc. on clothing if necessary.
____	____	____	Can fasten own buttons, snaps, velcro, etc.
____	____	____	Can reach toilet paper.
____	____	____	Can tear off a reasonable amount of toilet paper.
____	____	____	Can wipe self after using the toilet.
____	____	____	Can flush the toilet after using it.
____	____	____	Can adjust water temperature to wash hands after toileting.
____	____	____	Uses a reasonable amount of soap.
____	____	____	Washes hands.
____	____	____	Puts on coat (hat, mittens, etc.) when needed.
____	____	____	Zips coat (ties shoes) when needed.
____	____	____	Puts disposable items in the garbage.
____	____	____	Sticks, stones, etc. stay on the ground (or in pockets e.g., no running or throwing)
____	____	____	Puts toys, clothes, etc. in locker upon arrival.
____	____	____	Puts on name tags, or asks for help to do so.

pc:inecolog/TMII

SOCIAL COMPETENCE

Being able to start, maintain, and end interactions with children and adults in a way that others find acceptable.

FREQUENTLY	OCCASIONALLY	NOT OBSERVED	
____	____	____	Takes turns.
____	____	____	Keeps hands to self; non-violent conflict resolution (asking adult's help).
____	____	____	Does not swear/call others names - appropriate verbalization only.
____	____	____	Can recognize self's emotions - knows when mad or scared.
____	____	____	Can tell if another is mad, hurt, scared, etc.
____	____	____	Will ask for something he wants and can't get by self.
____	____	____	Will initiate an appropriate conversation with adults (remember the child's developmental level).
____	____	____	Will initiate appropriate conversation with peers.
____	____	____	Responds appropriately to reinforcement - doesn't begin to seek extra attention, act out, burst into tears, etc.
____	____	____	Does not resist physical (hand over hand, for example) assistance.
____	____	____	Chooses and walks with partner, holding hands, on field trips.
____	____	____	Understands social/courtesy phrases - greetings, apologies, "please" and "thanks".
____	____	____	Uses social/courtesy phrases.
____	____	____	Sits on carpet mat/chair without disrupting others.
____	____	____	Makes eye contact when speaking/being spoken to in a non-hostile situation, e.g., when not in trouble.
____	____	____	Follows adult/peer model for novel activities - can be shown what is supposed to be done, with or without verbal directions.

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